North America Data Center Power - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

Market Report | 2026-01-16 | 178 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

North America Data Center Power Market Analysis

The North America data center power market size in 2026 is estimated at USD 16.88 billion, growing from 2025 value of USD 15.81 billion with 2031 projections showing USD 23.39 billion, growing at 6.75% CAGR over 2026-2031. Solid growth is tied to AI-centric workloads that push rack densities from 5-15 kW to 40-140 kW, forcing operators to modernize electrical architectures. Hyperscale campuses anchor demand as they build gigawatt-scale substations, while edge computing rolls out micro sites that need autonomous UPS and generator sets. Stricter efficiency regulations such as PUE thresholds are accelerating liquid-cooling adoption and battery-energy-storage integration. Renewable power purchase agreements (PPAs) signed in Texas, Quebec, and Alberta have become a hedge against volatile utility tariffs while meeting corporate sustainability goals. Heightened grid-capacity constraints in tier-1 metros now shift expansion toward secondary U.S. markets, hydro-rich Canadian provinces, and Mexico's emerging colocation hubs.

North America Data Center Power Market Trends and Insights

Rising Adoption of Hyperscale and Mega Data Centers

Hyperscale operators now plan multi-building campuses that draw hundreds of megawatts from on-site substations and deploy liquid-cooled GPU racks requiring continuous, high-quality power. Meta's USD 65 billion program targets sub-1.1 PUE across North American sites, underscoring how power design has become a cornerstone of sustainability commitments.Projects such as

Alberta's Wonder Valley park pair natural-gas turbines with geothermal loops to create 1.4 GW of dedicated capacity, illustrating a shift toward self-generation when grid queues exceed four years. The clustering of campuses around cheap renewable resources generates regional load pockets that utilities must accommodate through accelerated transmission upgrades. Vendors that deliver factory-integrated switchgear, busways, and energy-storage modules win share by shortening electrification timelines and reducing site labor. The scale of investment also drives adoption of software-defined power monitoring that optimizes load placement and sequence-starts generators to prevent grid flicker.

Surge in Cloud Computing and OTT Traffic

Rapid growth in collaboration tools, streaming media, and generative AI inference pushes carriers and cloud providers to place compute closer to end users. Edge nodes ranging from 250 kW to 1 MW are now installed in retail strips, telco hubs, and municipal shelters, each fitted with lithium-ion UPS, compact gensets, and remote-management firmware. Distributed sites complicate capacity planning because utility feeders vary widely in voltage stability and outage frequency. Operators mitigate risk with dual-feed automatic transfer switches and cloud-based SCADA dashboards that aggregate alarms across hundreds of micro facilities. Content delivery acceleration also demands higher burst power to cover codec transcoding spikes, prompting adoption of static-switch UPS topologies that deliver millisecond transfer times. The cumulative effect of thousands of edge sites lifts overall regional load, yet each location must comply with state energy codes that increasingly cap allowable PUE thresholds.

High Upfront CAPEX for Power & Cooling Retrofits

Many brownfield data centers were designed for 5-15 kW racks and must be gutted to accommodate 40-140 kW AI loads. Electrical rooms often need transformer upsizing, busway rerouting, and replacement of air-cooled CRAC units with liquid chillers, driving project costs above new-build benchmarks. Operators must stage construction around live workloads, lengthening schedules and elevating risk. Smaller providers struggle to secure financing for large-scale electrical upgrades without anchor customers or government incentives. Even where funding is available, supply-chain lead times for 24-kV switchgear and 3 MVA UPS frames can exceed 60 weeks. The immediate cash outlay thus curbs near-term market penetration of AI-optimized power solutions.

Other drivers and restraints analyzed in the detailed report include:

Stringent PUE / Energy-Efficiency MandatesColocation Demand from BFSI and Healthcare DigitalizationGrid-Capacity Bottlenecks in Tier-1 Metros

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

The segment holding 44.40% of 2025 revenue remains power-distribution solutions-switchgear, PDU, and busway-that form the electrical backbone of every facility. However, services are expanding at a 6.98% CAGR because owners need design, integration, and predictive-maintenance expertise. Consulting engagements now begin months before ground-break, covering harmonic analysis, short-circuit studies, and energy-storage ROI modeling. Integration specialists engineer "single-line-diagram" conformity across multi-phase build-outs to avoid stranded capacity. Support teams embed edge analytics in UPS modules, generating data that auto-creates work orders before SLA breaches. Those value-added services raise stickiness, turning hardware suppliers into long-term partners.

Vendors bundle firmware upgrades that enable advanced runtime calculations, extending battery life and cutting replace-ment cycles. Where labor availability is tight, remote-hands contracts cover IR scanning, breaker racking, and thermal runway

avoidance. The North America data center power market benefits because service annuities smooth revenue between mega-project cycles, incentivizing firms to maintain large regional field forces that in turn reassure hyperscale clients of rapid response times.

Hyperscale campuses held 47.55% share in 2025, reflecting their sheer size and standardized power blocks. Yet edge and micro data centers deliver the fastest 6.92% CAGR as AI inference shifts compute toward consumers. These pods rely on 208/415 V distribution with high-efficiency line-interactive UPS to minimize footprint, contrasting with 13.8 kV feeders and double-conversion UPS found in hyperscale builds. The North America data center power market size for edge form factors thus grows on a unit-count basis rather than megawatt alone.

In parallel, enterprise facilities embrace hybrid models, expanding electrical capacity to host private-cloud clusters while off-loading latency-sensitive tasks to nearby edge nodes. Operators adopt modular battery cabinets that scale in 100 kW increments, matching phased IT expansions. Hyperscale builders experiment with direct renewable feeders combined with short-duration flywheel UPS to shave opex. The convergence of design philosophies drives suppliers to offer "families" of switchgear and UPS that share firmware and monitoring APIs, cutting integration costs across facility classes.

The North America Data Center Power Market Report is Segmented by Type (Solution, and Service), Data Center Type (Colocation, Hyperscale, and More), End-User Industry (BFSI, IT and Telecom, and More), Power Capacity (? 500 KW, Greater Than 3 MW, and More), Tier Standard (Tier I and II, Tier IV, and More), and Geography (United States, Canada and More). Market Forecasts are Provided in Terms of Value (USD).

List of Companies Covered in this Report:

ABB Ltd Schneider Electric Vertiv Group Corp. Eaton Corp. (incl. Tripp Lite) Legrand (Raritan, Starline) nVent (Enlogic) Siemens AG Cummins Inc. Caterpillar Inc. Generac Power Systems Mitsubishi Electric Delta Electronics Huawei Technologies Co. Ltd. Piller Power Systems Kohler Co. LayerZero Power Systems Socomec Group Panduit Corp. Riello UPS Power Innovations International Starline (Legrand) Powin Energy Bloom Energy

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

Table of Contents:

North America Data Center Power - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

Market Report | 2026-01-16 | 178 pages | Mordor Intelligence

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-02-08
		Signature